

## TECHNICAL SPECIFICATIONS

The F-Line.PRO system has been designed for the realization of networks for compressed air, vacuum, neutral gases and for the construction of industrial plants. Thanks to the very long experience in the industrial field, with focus on pneumatic applications, Tierre Group created a new system, highly technological. F-Line.PRO is a quick assembly system with a perfect pneumatic seal and a remarkable mechanical endurance. The special aluminium alloy of the pipes, coated by hot electrostatic paint, and the high performance reinforced polymer used for the fittings are the best solution for compressed air networks and minimize the risk of corrosion, always granting the best possible quality of the air for a long life of the system and of the connected tools in normal working conditions. Easy to be assembled, thanks to the low weight components (tubes, fittings and accessories), connection without glue or welding needs, reusable, modular, these are only some of the advantages when choosing F-Line.PRO.

## PLANT DESIGN

Here below you will find some tables and technical details to be considered as suggestions for the design of an efficient network. We suggest, when possible, to create networks through a closed ring. This solution will equilibrate the flow and will work as an air storage, keeping a stable air pressure. Moreover, a closed air ring is the best solution in case of maintenance and modifications, avoiding the need of a complete stop of the system. In order to reduce shocks and vibrations, we recommend you to use TUC tubes (see page 20) for connecting the network to the air compressor.

### COMPRESSOR'S INDICATIVE AIR DELIVERY (AT 7 BAR)

<b>KW</b>	1,5	3	4	5,5	7,5	11	12,5	15	18	22	29	37	45	55
<b>CV</b>	2	4	6	7,5	10	15	17	20	25	30	40	50	60	75
<b>NI/min</b>	230	400	600	900	1200	1750	2000	2500	3000	3500	4500	5500	7000	8500

## PLANT SIZING

According to the distance from the compressor to the most distant user and to the required flow, this table let you calculate the best F-Line.PRO diameter for your network, taking in consideration that the values refer to a closed ring at a pressure of 8 bar with a maximum pressure loss of 5%.

		METERS								
Nm <sup>3</sup> /h	NI/min	25	50	100	150	200	300	400	500	1000
36	600	20	20	20	20	25	25	25	25	40
54	900	20	20	20	25	25	25	40	40	40
72	1200	20	25	25	25	40	40	40	40	40
105	1750	25	25	40	40	40	40	40	40	
150	2500	25	40	40	40	40	40	40		
210	3500	40	40	40	40	40				
270	4500	40	40	40	40					
360	6000	40	40	40						
510	8500	40	40							



**FLOW DROPS FITTINGS TABLE**

This table is an another useful help in order to get a right plant dimensioning. Each fitting determines a loss of change and the table indicates the correspondence to pipe meters for every assembled fitting. The equivalent length obtained from all fittings will be added to the average length of the installed pipe.

SIZES	FITTINGS TYPES						
	FPC FPCA	FPUC	FPUL	FPUT	FPGT	FPBR	FPWLM
20	0,2	0,2	1,2	0,2	-	-	-
25	0,2	0,2	2	0,3	1,8	2	4
40	0,3	0,3	3,6	0,4	3,5	4	-

